

IN THE CLAIMS

Claims 13 - 31 are pending in this application. Please cancel original claims 1 - 12 without prejudice or disclaimer, and add new claims 13 - 31 as follows:

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1-12. (Cancelled)

13. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information, and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein,

a bit length of said dummy signal being less than a bit length of the burst signal.

14. (New) A magnetic recording system according to claim 13, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

15. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information; and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein

said burst area is formed with a bit length of said dummy signal less than a bit length of the burst signal, such that the burst signal is extractable from said burst area.

16. (New) A magnetic recording system according to claim 15, further comprising: a controller which extracts the burst signal element from said burst area.

17. (New) A magnetic recording system according to claim 15, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

18. (New) A magnetic recording system according to claim 13, wherein said perpendicular magnetic recording layer further has a user data area with a user data signal recorded therein, and a bit length of the burst signal is less than or equal to a bit length of the user data signal.

19. (New) A magnetic recording system according to claim 14, wherein said perpendicular magnetic recording layer further has a user data area with a user data signal recorded therein, and a bit length of the burst signal is less than or equal to a bit length of the user data signal.

20. (New) A magnetic recording system according to claim 18, wherein a maximum bit length of the burst signal is less than or equal to a maximum bit length of the user data signal.

21. (New) A magnetic recording system according to claim 19, wherein a maximum bit length of the burst signal is less than or equal to a maximum bit length of the user data signal.

22. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:  
a magnetic head for recording and reproducing information, and  
a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,  
said perpendicular magnetic recording layer having a burst area,  
said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded

therein, wherein

a frequency of said dummy signal is higher than a frequency of the burst signal.

23. (New) A magnetic recording system according to claim 22, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

24. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information, and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein

said burst area is formed with a frequency of said dummy signal higher than a frequency of the burst signal, such that the burst signal is extractable from said burst area.

25. (New) A magnetic recording system according to claim 24, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

26. (New) A magnetic recording system according to claim 24, further comprising: a controller which extracts the burst signal element from said burst area.

27. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information, and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for

positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein

a recording density of said dummy signal is higher than a recording density of the burst signal.

28. (New) A magnetic recording system according to claim 27, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

29. (New) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information; and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein

said burst area is formed with a recording density of said dummy signal less than a recording density of the burst signal, such that the burst signal is extractable from said burst area.

30. (New) A magnetic recording system according to claim 29, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

31. (New) A magnetic recording system according to claim 29, further comprising: a controller which extracts the burst signal element from said burst area.